

#3813
K

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

May 19, 2011

TO: Internal File

THRU: Ingrid Campbell, Environmental Scientist II, Lead *ICC*

FROM: James D. Smith, Environmental Scientist III *JS 05/23/2011*

RE: Midterm Permit Review, Canyon Fuel Company, Banning Siding Loadout, Permit # C/007/0034, Task #3813

SUMMARY:

On April 19, 2011, the Division notified Canyon Fuel Company (CFC) of the commencement of the midterm permit review for Banning Siding Loadout: the Division's expected midterm-review completion date is May 19, 2011. The following items were listed in the notification as potential review items:

- A. Review of the Plan to ensure that the requirements of all permit condition, division orders, notice of violation (NOV), abatement plans, and permittee-initiated Plan changes approved subsequent to permit approval or renewal (whichever is the most recent) are appropriately incorporated into the Plan document.
- B. Ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program which have occurred subsequent to permit approval or renewal.
- C. Review applicable portions of the permit to ensure that the Plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
- D. Evaluate the compliance status of the permit to ensure that all unabated enforcement actions comport with current regulations for abatement; verify the status of all finalized penalties levied subsequent to permit issuance or permit renewal, and verify that there are no demonstrated patterns of violation (POV). This will include an AVS check to ensure that Ownership and Control information is current and correct.

TECHNICAL MEMO

- E. Evaluate the reclamation bond to ensure that coverage adequately addresses permit changes approved subsequent to permit approval or renewal, and to ensure that the bond amount is appropriately escalated in current-year dollars.
- F. Evaluate the permit for compliance with variances or special permit conditions.
- G. Optional for active mines, mandatory for reclamation only sites: conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness for operational, reclamation, and contemporaneous reclamation practices undertaken on predetermined portions of the disturbed area to minimize, to the extent practicable, the contribution of acid or toxic materials to surface or groundwater, and to otherwise prevent water pollution.

This Technical Analysis particularly addresses Item C. Several items need to be updated in the MRP. The Permittee must submit an amendment to the permit that includes the following items:

R645-301-121.100, R645-301-121.200, and R645-303-212, - References to Figures 7-3, 7-4, and 7-5 must be revised or otherwise clarified; these figures are not found in the MRP.

TECHNICAL ANALYSIS:

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

Chapter 7 contains references to Figures 7-3, 7-4, and 7-5 (but not to 7-1 or 7-2). These three Figures cannot be found in the MRP. Information on Exhibits 7-2 and 7-3 and unnumbered

figures in Appendix 7-6 corresponds with some of the information cited, but such correspondence is not clear or consistent. Some of the referenced information does not appear to be anywhere in the MRP.

- Section *R645-301-742.300* states that diversion details are shown on Exhibit 7-1 and Figure 7-3, and berms will be repaired to meet the minimum design criteria of the “compact berm” shown in Figure 7-3.
- Exhibit 7-1 shows several devices or structures labeled “drive-through”; Section *R645-301-742.300* indicates the design details for the “drive-through” are shown on Figure 7-3.
- According to Section *R645-301-732.300*, ditches will be regraded, where necessary, to ensure that they maintain the cross section noted in Figure 7-5. However, there is no Figure 7-5 and no ditch cross-section is found in the MRP.
- Section *R645-301-742.312* states that Exhibit 7-1 and Figure 7-3 show and Section *R534-301-742.300* describes the designs, locations, construction, maintenance, and use of the diversions and appurtenant structures.
- An embankment constructed in the southeast corner of the site to direct runoff toward the drainage channel and sedimentation pond is supposedly shown in Figure 7-3; Exhibit 7-1 shows such an embankment.
- Section *R645-301-732.200* states that the stage-capacity curve for the sedimentation pond is in Figure 7-4. There is no Figure 7-4 in the MRP; however, there is an unnamed/unnumbered stage-capacity curve on page 5 of Appendix 7-6.

Sediment Control Measures

A sedimentation pond and five ASCAs provide sediment control at the Banning Siding Loadout. Exhibit 7-1 shows the locations of these features. Sediment control measures are discussed in Section *R645-301-732* of the MRP.

Siltation Structures: Sedimentation Ponds

Exhibits 7-2 and 7-3 show the details of sedimentation pond construction, and Appendixes 7-5, 7-6, 7-7, and 7-9 contain information on pond design and related runoff and sediment control.

The sedimentation pond has a designed total storage volume of 1.45 acre-feet (Appendix 7-6), which should be sufficient to hold 1.18 acre-feet of runoff from the 10-year, 24-hour design storm (1.78 inches) and 0.27 acre-feet of sediment (0.027 acre-feet/year x 10 years).

Section *R645-301-732.200* gives critical elevations for the pond; similar information is on Exhibit 7-2 and in Appendix 7-6. Although the three sets of elevations numbers are similar,

TECHNICAL MEMO

they are not the same; those in the Appendix and on Exhibit 7-2 appear to be design values while those in the text (generally 1 foot higher) are as-built elevations.

	Section R645-301-732.200	Exhibit 7-1	Exhibit 7-2	Appendix 7-6	Exhibit 7-3
Top of embankment - constructed	5498.0 (p. 7-18)* 5496.5 (p. 7-17)		5496.5 (C-C')	5496.5 (p. 29)	
Top of embankment – settled (5%)	5497.2 (p. 7-18)*		5496.2 (A-A')	5496.2 (p. 13)	
Emergency spillway		5496.3*		5495.2 (p. 12)	
Water elevation - 25-yr, 24-hr storm	0.9 ft above principal spillway (p. 7-18)		5495.1 (B-B')	5495.1 (p. 12)	
Principal spillway			5494.2 (C-C')	5494.2 (p. 12)	
Total storage	5495.2 (p. 7-17)*		5494.2 (B-B')	5494.2 (p. 5)	
Decant invert					5488.5
Sediment Storage	5488.8 (p. 7-17)*		5487.8 (B-B')	5487.8 (p. 5)	
Sediment cleanout	5487.6 (p. 7-17)*		5486.6 (B-B')	5486.6 (p. 5)	
Bottom of pond		5486.1*	5484.0 (A-A')	5484.0 (p. 4)	

* These are as-built values; all others are design values

Siltation Structures: Exemptions

A thick layer of gravel provides runoff and sediment control for the substation pad. The Permittee previously identified this as a Small Area Exemption; however, the substation and pad area were sold to East Carbonics, Inc. in 2004 (Section R645-301-732.30) so they are no longer part of the permit or disturbed areas.

Discharge Structures

Discharge structures are discussed in Section R645-301-732.200. The sedimentation pond has primary and emergency spillways and a decanting system. Discharge structures were designed for a 25-year, 24-hour event (2.15 inches).

All discharge structures report to a riprap apron in the receiving ephemeral channel. Appendix 7-7 contains the design calculations for the apron. Detail "C" on Exhibit 7-3 shows details of the riprap apron.

Calculations for the primary spillway are on pages 6-12 in Appendix 7-6. Cross-section C-C' on Exhibit 7-2 and Detail "D" on Exhibit 7-3 show the design of the principal spillway. Pages 12 and 13 of Appendix 7-6 contain the design criteria for the emergency spillway.

Detail "B" on Exhibit 7-3 illustrates the decanting system.

Impoundments

Section *R645-301-732.210* states "The sediment pond will not be removed according to the reclamation schedule shown in Table 5-2 of this permit." The schedule that will be used is not given. Sections *R645-301-763* and *764* clarify that: the sedimentation pond area will be maintained until removal is authorized by the Division; the disturbed area [reporting to the pond] has been stabilized and revegetated; and the land on which the sedimentation pond was built will be regraded and revegetated according to the reclamation plan. Section *R645-301-764* refers to the Reclamation Timetable in Table 5-2 for structure removal; this schedule may provide a general idea of how the pond reclamation will proceed once initiated, but removal of the pond will not be done contemporaneously with other reclamation (Utah Coal Mining Rules *R645-301-763.100* states: In no case will the structure [sedimentation pond] be removed sooner than two years after the last augmented seeding).

Findings:

The Permittee must provide the following information in a separate amendment to the permit, in accordance with:

R645-301-121.100, R645-301-121.200, and R645-303-212, - References to Figures 7-3, 7-4, and 7-5 must be revised or otherwise clarified; these figures are not found in the MRP.

RECOMMENDATIONS:

The midterm review is complete. CFC must submit the deficient items listed above in a separate amendment to the permit.